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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,871	08/04/2003	Ronald F. Renzi	33413/US	5267
7590 Edward W. Bulchis DORSEY & WHITNEY LLP Suite 3400 1420 Fifth Avenue Seattle, WA 98101		01/09/2008	EXAMINER HYUN, PAUL SANG HWA	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/633,871

Applicant(s)

RENZI ET AL.

Examiner

Paul S. Hyun

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 7, 9, 10, 12-21, 57, 58 and 61-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 9, 10, 12-21, 57, 58 and 61-64 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### REMARKS

Claims 1-4, 7, 9, 10, 12-21, 57, 58 and 61-64 are currently pending.

The claim rejections under 35 U.S.C. section 112 cited in the previous Office action have been withdrawn in light of the clarification.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **1, 2, 9, 10, 12-17, 58 and 61-64** are rejected under 35 U.S.C. 102(e) as being anticipated by Berndt et al. (US 6,811,668 B1).

Berndt et al. disclose a modular microfluidic apparatus contained in a single housing (see Fig. 6a), the apparatus comprising a fluid manifold base 57 coupled to a microfluidic chip 52 (see Fig. 4). The fluid manifold base comprises a plurality of bays extending through the thickness of the base, and a plurality of reservoirs 60 and 61 positioned within the bays wherein reservoirs 60 can comprise electrodes (see lines 20-30, col. 11). The microfluidic chip 52 comprises an upper surface that is coupled to the lower surface of the fluid manifold base, a plurality of inlets and ports 53 and 54 positioned in locations corresponding to the reservoirs, and a plurality of serpentine

channels in fluid communication with the inlets (see Fig. 2) wherein the serpentine channels can be used for electrophoretic separation (see lines 5-19, col. 4). The reference discloses that the interface between the microfluidic chip and any overlying substrate (e.g. the fluid manifold base) is typically sealed (see lines 5-10, col. 9). The device further comprises a sensor module 6 (e.g. optical via laser diode) for detecting an analyte (see lines 40-45, col. 8), an interface 46 for viewing the results of the detection, and a power module 56 for supplying current/voltage.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **18-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt et al.

Berndt et al. do not disclose multiple microfluidic chips, detectors or manifold bases. However, it would have been obvious to one of ordinary skill in the art to provide

the apparatus with multiple units, each unit comprising a reservoir, a microfluidic chip and a detector, to enable simultaneous sample processing. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (holding that mere duplication of parts has no patentable significance unless a new and unexpected result is produced).

Claims **7 and 57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt et al. in view of Fujii et al. (US 2002/0071788 A1).

Berndt et al. do not disclose a filter.

Fujii et al. disclose a microfluidic chip for detecting analytes in a blood sample. The inlet of the microfluidic chip comprises a filter for separating blood cells from plasma (see [0054]). In light of the disclosure of Fujii et al., it would have been obvious to one of ordinary skill in the art to provide the reservoirs and/or the microfluidic chip disclosed by Berndt et al. with a filter so that it can analyze blood samples.

### ***Response to Arguments***

Applicant's arguments with respect to the art rejections have been considered but are moot in view of the new grounds of rejection.

### ***Allowable Subject Matter***

Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Berndt et al. disclose a modular microfluidic apparatus comprising a fluid manifold base coupled to a microfluidic chip. The fluid manifold base comprises a plurality of bays extending through the thickness of the base, and a plurality of reservoirs positioned within the bays. The microfluidic chip comprises a plurality of inlets and ports positioned in locations corresponding to the reservoirs. However, the apparatus disclosed by Brendt et al. do not disclose sealed reservoirs configured to be penetrated by a needle that enables fluid communication between the reservoirs and the microfluidic chip. Neither the reference nor prior art offer motivation to provide the apparatus disclosed by Brendt et al. with a needle/seal combination.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul S. Hyun whose telephone number is (571)-272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PSH  
1/7/08

  
Jill Warden  
Supervisory Patent Examiner  
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